17. (Amended) The host cell of claim 12, wherein the MURF-1 polypeptide has the sequence of SEQ ID NO:2.

18. (Amended) A method of using a host cell comprising an expression cassette comprising a polynucleotide encoding a murine MURF-1 polypeptide and a promoter active in said host cell, said promoter directing the expression of said polypeptide, said method comprising culturing the host cell under conditions suitable for the expression of the murine MURF-1 polypeptide.

Q5

REMARKS

I. Status of the Claims

Claims 1-6 and 8-35 are under examination (claims 7 and 36-115 having been withdrawn pursuant to a restriction requirement). Claims 4, 15 and 17 are objected to, and claims 1-3, 5, 6, 8-16 and 18-35 stand rejected, variously, under 35 U.S.C. §101, §102, §103, §112 first and second paragraphs. The specific grounds for rejection, and applicants' responses thereto, are set out in detail below.

Applicants acknowledge the modification of the restriction requirement, and appreciated the examiner's reconsideration thereof.

II. Rejection Under 35 U.S.C. §101

Claims 1-3, 5, 6, 8 and 9 stand rejected under §101 as encompassing non-statutory subject matter. The examiner has suggested inclusion of the term "isolated" in claim 1, which

amendment has been provided. The rejections are therefore believed obviated; reconsideration and withdrawal of the rejection is hereby respectfully requested.

III. Rejections Under 35 U.S.C. §112, First Paragraph

A. Written Description

The examiner has rejected claims 1, 5, 6, 8, 14, 16, 18 and 31-35 as lacking a sufficient written description. Applicants traverse, but in the interest of advancing the prosecution, they have incorporated the "murine" limitation of claims 2 and 15 (not rejected) into claims 1, 12 and 18, thereby obviating the rejection as to claims 1, 5, 6, 8, 14, 16 and 18. With regard to claims 31-35, applicants traverse the rejection, but in the interest of advancing the prosecution, the claims have been canceled.

Reconsideration and withdrawal of the rejection is respectfully requested.

B. Enablement

The examiner has rejected claims 1, 5, 6, 8, 14, 16, 18 and 31-35 as lacking an enabling disclosure. Applicants traverse, but in the interest of advancing the prosecution, they have incorporated the "murine" limitation of claims 2 and 15 (not rejected) into claims 1, 12 and 18, thereby obviating the rejection as to claims 1, 5, 6, 8, 14, 16 and 18. With regard to claims 31-35, applicants traverse the rejection, but in the interest of advancing the prosecution, the claims have been canceled.

Reconsideration and withdrawal of the rejection is respectfully requested.

IV. Rejections Under 35 U.S.C. §112, Second Paragraph

Claims 6, 10, 22 and 33 stand rejected under the second paragraph of §112. Each of claims 6, 10 and 11 have been amended, and claim 33 has been canceled.

Reconsideration and withdrawal of the rejections is respectfully requested.

V. Rejections Under 35 U.S.C. §102

The examiner has rejected a number of claims over various references. However, none of these rejections includes claim 15. As discussed above, claims 31-35 have been canceled, and the "murine" limitation of claim 15 has been introduced into claims 1, 12 and 18. Thus, it is believed that claims 1, 12 and 18, and all claims depending therefrom (2-6, 8-11, 13, 14, 16 and 17), are novel. With regard to claims 19-30, applicants traverse the rejection, but the claims have been canceled in the interest of advancing the prosecution.

Reconsideration and withdrawal of the rejection is therefore respectfully requested.

VI. Rejections Under 35 U.S.C. §103

The examiner has advanced three rejections under §103 of claims 20-25, 33 and 35. As discussed above, all of these claims have been canceled in the interest of advancing the prosecution.

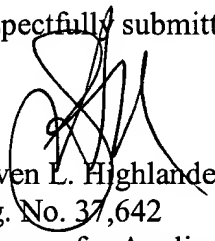
Reconsideration and withdrawal of the rejection is therefore respectfully requested.

VII. Conclusion

In light of the foregoing, applicants respectfully submit that all claims are in condition for allowance, and an early indication to that effect is earnestly solicited. The Examiner is invited to contact the undersigned attorney at (512) 536-3184 with any questions, comments or suggestions relating to the referenced patent application.

Please date stamp and return the enclosed postcard as evidence of receipt.

Respectfully submitted,



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Date: May 28, 2003

APPENDIX A: MARKED UP COPY OF AMENDED CLAIMS

1. (Amended) [A] An isolated DNA segment encoding a murine MURF-1[, MURF-2 or MURF-3] polypeptide.

2. (Canceled) The DNA segment of claim 1, wherein the MURF-1, MURF-2 or MURF-3 polypeptide is murine.

3. (Amended) The DNA segment of claim [2]1, wherein the MURF-1 polypeptide has the sequence of SEQ ID NO:2[, the MURF-2 polypeptide has the sequence of SEQ ID NO:4, and the MURF-3 polypeptide has the sequence of SEQ ID NO:6].

4. (Amended) The DNA segment of claim 3, wherein the MURF-1 DNA segment has the sequence of SEQ ID NO:1, the MURF-2 DNA segment has the sequence of SEQ ID NO:3, and the MURF-3 DNA segment has the sequence of SEQ ID NO:5.

6. (Amended) The DNA segment of claim 5, wherein the promoter is not a native MURF-1, MURF-2 or MURF-3 [coding region] promoter.

10. (Amended) The DNA segment of claim 9, wherein the [vector] DNA segment is comprised within a viral vector.

11. (Amended) The DNA segment of claim 10, wherein the [vector] DNA segment is comprised within a non-viral vector.

12. (Amended) A host cell comprising a DNA segment that encodes a murine MURF-1[, MURF-2 or MURF-3] polypeptide, wherein said DNA segment comprises a promoter heterologous to the murine MURF-1[, MURF-2 or MURF-3] coding region.

15. (Canceled) The host cell of claim 12, wherein the MURF-1, MURF-2 or MURF-3 polypeptide is murine.

17. (Amended) The host cell of claim [15]12, wherein the MURF-1 polypeptide has the sequence of SEQ ID NO:2[, the MURF-2 polypeptide has the sequence of SEQ ID NO:4, and the MURF-3 polypeptide has the sequence of SEQ ID NO:6].

18. (Amended) A method of using a host cell comprising an expression cassette comprising a polynucleotide encoding a murine MURF-1[, MURF-2 or MURF-3] polypeptide and a promoter active in said host cell, said promoter directing the expression of said polypeptide, said method comprising culturing the host cell under conditions suitable for the expression of the murine MURF-1[, MURF-2 or MURF-3] polypeptide.

19. (Canceled) An isolated nucleic acid segment comprising at least 15 contiguous nucleotides of SEQ ID NO:1, SEQ ID NO:3 or SEQ ID NO:5.

20. (Canceled) The isolated nucleic acid segment of claim 19, wherein said segment is 15 nucleotides in length.

21. (Canceled) The isolated nucleic acid segment of claim 19, wherein said segment is 20 nucleotides in length.

22. (Canceled) The isolated nucleic acid segment of claim 19, wherein said segment is 25 nucleotides in length.

23. (Canceled) The isolated nucleic acid segment of claim 19, wherein said segment is 30 nucleotides in length.

24. (Canceled) The isolated nucleic acid segment of claim 19, wherein said segment is 35 nucleotides in length.

25. (Canceled) The isolated nucleic acid segment of claim 19, wherein said segment is 50 nucleotides in length.

26. (Canceled) The isolated nucleic acid segment of claim 19, wherein the number of contiguous nucleotides is 20.

27. (Canceled) The isolated nucleic acid segment of claim 19, wherein the number of contiguous nucleotides is 25.

28. (Canceled) The isolated nucleic acid segment of claim 19, wherein the number of contiguous nucleotides is 30.

29. (Canceled) The isolated nucleic acid segment of claim 19, wherein the number of contiguous nucleotides is 35.

30. (Canceled) The isolated nucleic acid segment of claim 19, wherein the number of contiguous nucleotides is 50.

31. (Canceled) An isolated nucleic acid segment of from 14 to about 888 nucleotides in length that hybridizes to the nucleic acid segment of SEQ ID NO:1, SEQ ID NO:3 or SEQ ID NO:5, or complements thereof, under standard hybridization conditions.

32. (Canceled) The isolated nucleic acid segment of claim 31, further comprising an origin of replication.

33. (Canceled) The isolated nucleic acid of claim 31, wherein said isolated nucleic acid is a viral vector selected from the group consisting of retrovirus, adenovirus, herpesvirus, vaccinia virus, poxvirus, and adeno-associated virus.

34. (Canceled) The isolated nucleic acid of claim 31, wherein said nucleic acid is packaged in a virus particle.

35. (Canceled) The isolated nucleic acid of claim 31, wherein said nucleic acid is packaged in a liposome.

APPENDIX B: CLEAN COPY OF PENDING CLAIMS (UNOFFICIAL)

1. (Amended) [A] An isolated DNA segment encoding a murine MURF-1[, MURF-2 or MURF-3] polypeptide.

3. (Amended) The DNA segment of claim [2]1, wherein the MURF-1 polypeptide has the sequence of SEQ ID NO:2[, the MURF-2 polypeptide has the sequence of SEQ ID NO:4, and the MURF-3 polypeptide has the sequence of SEQ ID NO:6].

4. (Amended) The DNA segment of claim 3, wherein the MURF-1 DNA segment has the sequence of SEQ ID NO:1, the MURF-2 DNA segment has the sequence of SEQ ID NO:3, and the MURF-3 DNA segment has the sequence of SEQ ID NO:5.

5. The DNA segment of claim 1, wherein the DNA segment is positioned under the control of a promoter.

6. (Amended) The DNA segment of claim 5, wherein the promoter is not a native MURF-1, MURF-2 or MURF-3 [coding region] promoter.

8. The DNA segment of claim 5, further comprising a polyadenylation signal.

9. The DNA segment of claim 5, further comprising an origin of replication.

10. (Amended) The DNA segment of claim 9, wherein the [vector] DNA segment is comprised within a viral vector.

11. (Amended) The DNA segment of claim 10, wherein the [vector] DNA segment is comprised within a non-viral vector.

12. (Amended) A host cell comprising a DNA segment that encodes a murine MURF-1[, MURF-2 or MURF-3] polypeptide, wherein said DNA segment comprises a promoter heterologous to the murine MURF-1[, MURF-2 or MURF-3] coding region.

13. The host cell of claim 12, further defined as a prokaryotic host cell.

14. The host cell of claim 12, further defined as a eukaryotic host cell.

16. The host cell of claim 14, wherein the host cell is a secretory cell.

17. (Amended) The host cell of claim [15]12, wherein the MURF-1 polypeptide has the sequence of SEQ ID NO:2[, the MURF-2 polypeptide has the sequence of SEQ ID NO:4, and the MURF-3 polypeptide has the sequence of SEQ ID NO:6].

18. (Amended) A method of using a host cell comprising an expression cassette comprising a polynucleotide encoding a murine MURF-1, MURF-2 or MURF-3 polypeptide and a promoter active in said host cell, said promoter directing the expression of said polypeptide, said method comprising culturing the host cell under conditions suitable for the expression of the murine MURF-1, MURF-2 or MURF-3 polypeptide.

APPENDIX C: MARKED UP COPY OF SPECIFICATION

In the Specification

Page 3, lines 21-29:

Therefore, in one aspect of the invention, there is [provide] provided a DNA segment encoding a MURF-1, MURF-2 or MURF-3 polypeptide. The MURF-1, MURF-2 or MURF-3 polypeptide may be human, mouse, dog, rabbit, rat, *Drosphila*, yeast or other species. In a particular embodiment, the MURF-1 polypeptide has the sequence of SEQ ID NO:2, the MURF-2 polypeptide has the sequence of SEQ ID NO:4, and the MURF-3 polypeptide has the sequence of SEQ ID NO:6. In yet more particular embodiments, the MURF-1 DNA segment has the sequence of SEQ ID NO:1, the MURF-2 DNA segment has the sequence of SEQ ID NO:3, and the MURF-3 DNA segment has the sequence of SEQ ID NO:5.

Page 29, lines 18-28:

[ntisense] Antisense constructs may be designed to bind to the promoter and other control regions, exons, introns or even exon-intron boundaries of a gene. It is contemplated that the most effective antisense constructs will include regions complementary to intron/exon splice junctions. Thus, it is proposed that a preferred embodiment includes an antisense construct with complementarity to regions within 50-200 bases of an intron-exon splice junction. It has been observed that some exon sequences can be included in the construct without seriously affecting the target selectivity thereof. The amount of exonic material included will vary depending on the particular exon and intron sequences used. One can readily test whether too much exon DNA is included simply by testing the constructs *in vitro* to determine whether normal cellular function is affected or whether the expression of related genes having complementary sequences is affected.